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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/712,497	HIGASHI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ronnie Mancho	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--  
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/13/03.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☒ The drawings filed on 13 November 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>11/13/03; 12/22/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material   | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

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**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 1-4 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 1, the applicant's particular system and associated method comprising [a reference position determining part which determines the reference position by correcting the steering initiation position by an amount corresponding to the reference error determined and stored in the preceding control action;

a current position determining part which determines the current position of the steering member from the reference position, the steering angle detection signal, the steering direction of the steering member, and a stored correspondence relationship between the steering angle detection signal and the variation in the steering angle of the steering member;

an error determining part which determines the deviation between the current position of the steering member at the time when the position specifying signal is generated and the generation position of the position specifying signal as the error in the current control action;

a corrected position determining part which determines the corrected position of the steering member by correcting the current position by an amount corresponding to the error in the current control action; and

a reference error for the next control action determining and storing part which determines and stores the reference error for the next control action by adding the error in the current control action to the cumulative value of the errors in the control actions up to the preceding control action;

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wherein the steering actuator is controlled in accordance with the corrected position of the steering member as the steering angle from the center point position of the steering member.]... in combination with the other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record.

The dependent claims, being further limiting to the independent claims, definite and enabled by the Specification are also allowed.

The closest prior art, Deguchi et al (6546323) disclose a similar steering control apparatus as the applicant. Deguchi et al did not disclose [a reference position determining part which determines the reference position by correcting the steering initiation position by an amount corresponding to the reference error determined and stored in the preceding control action;

a current position determining part which determines the current position of the steering member from the reference position, the steering angle detection signal, the steering direction of the steering member, and a stored correspondence relationship between the steering angle detection signal and the variation in the steering angle of the steering member;

an error determining part which determines the deviation between the current position of the steering member at the time when the position specifying signal is generated and the generation position of the position specifying signal as the error in the current control action;

a corrected position determining part which determines the corrected position of the steering member by correcting the current position by an amount corresponding to the error in the current control action; and

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a reference error for the next control action determining and storing part which determines and stores the reference error for the next control action by adding the error in the current control action to the cumulative value of the errors in the control actions up to the preceding control action;

wherein the steering actuator is controlled in accordance with the corrected position of the steering member as the steering angle from the center point position of the steering member.] Thus, the closest prior art fails to anticipate or render Applicant's limitations above obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### Communication

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

6/24/05

  
JACK KEITH  
PRIMARY EXAMINER

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